

# SCIENCE & GOVERNMENT REPORT

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## R&D Anti-Inflation Summit Finds Bag of Tricks is Empty

Mercifully unattended by the general press, representatives of science and technology assembled September 18 at that elite emporium of dyspepsia, Washington's Cosmos Club, for one of those presidentially decreed anti-inflation "mini-summits." But as was the case at the many better-publicized pow-wows of this genre, the frontiersmen of knowledge rambled to the tacit conclusion that their profession—though often touted in the past as the cornucopia of economic miracles—can't knock two cents off the price of anything. After several hours of desultory conversation, chaired by NSF Director H. Guyford Stever, the President's Science Adviser, no one proposed kneeling

to pray for a natural remission of inflation, but if such a motion had been made, it might well have been adopted as the most plausible proposal of the day.

In contrast to the other mini-summits, such as those on housing, education, labor, and business, the session on Science, Technology and the Economy had many signs of a very late afterthought on the part of the White House, and not inconceivably, it may have been convened in response to a plea for the President to acknowledge that science and technology may have something to contribute to the restraint of inflation.

Invitations were issued by telephone less than a week before the meeting was to be held (see p. 3 for list of attendees), but many of those who were able to attend

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## HEW Chief Invites \$1 Billion Cut

Though the "mini-summit" on Science, Technology and the Economy was generally characterized by polite and aimless palaver, HEW Assistant Secretary for Health Charles C. Edwards sounded off on one occasion as though he were in the privacy of his own conference room.

"I am absolutely convinced in my own mind," he said, "that we could cut—I would be very hesitant to indicate this too publicly—but we could probably cut a billion dollars out of the Federal health budget and it wouldn't have an appreciable impact on the health and well being of the American people."

"I think we have allowed over the years—. There is a tremendous amount of fluff in the health system both in the federal government and in the academic community and in the non-academic community of the private sector."

Edwards, who formerly headed the Food and Drug Administration, also took a swipe at Congressional criticism of the pharmaceutical industry, noting that "The drug industry has over the last 10 years been periodically brought before the Congress, and they are a very popular target. And yet the fact of the matter is the drug industry . . . has held their prices down probably better than any other single sector in the health care system, and they have also contributed more to the health of the world, not just to this nation, in terms of being out in front in terms of research and development of drugs."

"I think the Congress has got to reevaluate its whole stance in terms of the role of government regulatory agencies."

## In Brief

NSF's program of Research Applied to National Needs is being subjected to a thorough review by the General Accounting Office, Congress's fiscal watchdog. The review, a friendly one inspired by the feeling that the costly RANN program is out of its infancy and should be showing results, will have a critical bearing on whether NSF will be permitted to plunge still further into applied research. Results are due early next year.

The Senate Appropriations Committee came down hard last month on the hapless National Institute of Education (SGR Vol. IV, No. 16), recommending that NIE be cut off without a penny next year. The Committee charged that "NIE has shown little progress in reaching goals set forth in its enabling legislation" and "The Institute's success in nearly all endeavors it undertook can be considered minimal, at best."

Micah H. Naftalin, a Washington lawyer with extensive experience in government, has been appointed first director of the newly established Assembly of Engineering of the National Research Council, operating arm of the National Academy of Sciences—National Academy of Engineering. He was previously senior staff officer of NAE's Committee on Public Engineering Policy.

Publishers of a directory of research institutions have solicited information for an entry for the Center for the Absorption of Federal Funds, apparently on the basis of that organization being listed in these columns as homebase of SGR's occasional contributor, Dr. Grant Swinger.

## CEQ Head Assails Attacks on Environmental Spending

At another pre-economic summit meeting, one concerned with natural resources, Russell W. Peterson, Chairman of the Council on Environmental Quality, took out after those who argue that expenditures on environmental programs add significantly to inflation.

"Statements which refer to expenditures made for environmental purposes as 'non-productive' demonstrate a basic confusion between accounting terminology and reality," he suggested, and in any case "the economic impact of these expenditures is not nearly as significant as some would have us believe."

For a start, CEQ's own analysis of the impact of environmental programs on the economy indicates that they "account for at most roughly one half of one percent of our current inflation."

As for the argument that expenditures on pollution control are driving up interest rates by soaking up large amounts of capital, Peterson pointed out that expenditures made in 1973 to satisfy requirements of federal water and air pollution control legislation amounted to about one percent of the GNP, or only between five and six percent of the total outlay on plant and capital equipment.

When the Administration looks for possible programs to cut in its economy drive, Peterson warned, it would be "false economy to sacrifice the goals of clean air and water for the sake of a federal budget saving which in Fiscal Year 1975 would amount to one-fifth of one percent of total budget authority if the entire program were cancelled."

### SUMMIT (Continued from page 1)

frequently slipped in and out to attend to prior commitments. In line with President Ford's directive that the meetings be held in public, invitations were issued to the press, but such was the hurried nature of the preparations, that the notification arrived the evening before the meeting was to open, and even at that late hour, a roster of participants was not available.

When the meeting convened, it was announced that several of those listed as attending, among them Bells Labs President William O. Baker, one of the most influential figures in Washington science affairs, was preoccupied with a meeting that the National Academy of Engineering (NAE) was holding on encouraging minority group members to study engineering. It was announced that Baker had met the previous evening to discuss the summit privately with a group that included National Academy of Sciences President Philip Handler, NAE President Robert C. Seamans Jr., and TRW Chairman Simon Ramo, none of whom made it to the Cosmos Club either.

The fullscale meeting started off with Science Adviser Stever shedding his jacket and announcing that "they"—presumably at the White House—had asked him to "get together with a group of people in the science and technology area to work on some inputs from that area to say what we thought science and technology's relationship to inflation, short term and long term, would be, what we could do, and so on."

The focus, he explained, would be on barriers to applying science and technology to the improvement of productivity and efficiency, among them "regulations that are unnecessarily restrictive, court decisions, limitations imposed by environmental controls, availability of new inventions, labor practices," and so forth. These subjects would be looked at, he continued, in the areas of

manufacturing materials and energy, health services, and agriculture and food.

After that, the meeting proceeded at the level of a freshman seminar the morning after the big game. Edward E. David Jr., who served for two years as White House science adviser under Nixon, commenced by announcing that the group he met with the previous evening "didn't have much time . . . I was counting on another hour this morning to try to get things crystallized."

Having made that disclaimer, David proceeded to suggest that in trying to curb inflation, more thought should be given to the costs of energy and materials, in contrast to labor costs, since the first two were rapidly rising in price.

To assist with this, he continued, the "government might provide a national index of these items, productivity per unit energy input, productivity per unit material input, as well as what we do now, which is productivity per manpower input . . . And we'd all like to see techniques for minimizing scrap, maximizing yield and recovery of materials from the production process . . . Such a project might be called 'Project Sow's Ear,'" David said. He added that "There was a feeling among many people in the group that we ought to try to make R&D activities, or point R&D activities, toward a more productive role rather than toward some of the things that it is pointed now." What he meant by this, he went on to explain, was that federal regulations, presumably those concerned with environment and safety, were absorbing a good deal of R&D resources that might otherwise be directed toward productivity.

David, who is now executive vice president for research, planning, and development of Gould, Inc., a Chicago-based electrical and electronics manufacturer, also said that attention should be given to the effects that tax and anti-trust actions have on corporate R&D, but he noted

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## ... Summit (cont.): "There Aren't Many Answers."

that "We recognize that there can't be any very definitive statements about those matters. There will always be argument."

Next came Donald J. Blickwede, vice president for research of Bethlehem Steel, who said that his industry needed capital for expansion and that "I don't feel myself that technology has a major role to play in supplying the new steelmaking facilities that our country needs." He left immediately for another appointment.

Robert Lund, from MIT, enriched the proceedings with the observation that "If you're talking about the shortterm, it seems that about all we can do from a research and development standpoint is to modify existing practice rather than to introduce new products or processes." Lund said attention should be directed to "laws which in experience have been shown to be either wasteful or non-effective," citing, as what he considered an example, the federal requirement that automobile bumpers be able to withstand a five-mile-per-hour impact. Manufacturers, he said, should be encouraged "to design and sell products that use energy and materials efficiently. . ."

Lewis M. Branscomb, chief scientist of IBM, then referred back to the meeting of the previous evening, whereupon David interjected that "Last night's discussion was a mish-mash."

Branscomb then proceeded to state that the technology that is now available is the result of past research and that the "national leadership" should therefore realize the importance of continuing with research. He also recommended that the leadership of the labor movement should be more receptive to new technology. And, easily garnering the day's prize for *chutzpah*, the IBM Chief Scientist spoke out against the deleterious effect of "artificially rigged prices."

Amidst many comings and goings of the participants and references to inadequate time for preparation, the mini-summit droned on. Paul F. Chenea, a vice president of General Motors, disclosed that "about 50 percent of our people are struggling with the problems of safety and environment and noise, and so forth," and though he said he didn't "want anybody to jump to the conclusion that I am against these socially desirable goals," he believed that "if science and technology can return their attention to new products and higher efficiency in the use of manpower, materials and energy, I think they will continue to feed the economy in a positive way."

Both the National Science Foundation and the National Bureau of Standards announced programs two years ago to determine the role that the federal government might play in spurring industrial innovation and improving productivity. But when representatives of these agencies were asked to report on their findings, they didn't have much to offer. Richard W. Roberts, director of NBS, said that

because of delays in funding, the program there only recently got underway, but, in any case, he said, "I don't think there is going to be any massive impact, as a matter of fact. The number of dollars committed to this activity are relatively small."

Steuer, speaking for NSF's program, said, "We have had what I would call mixed success. We have had limited success in selling it to the Administration and the Congress, because it started out big but was quickly cut back."

Speaking on health care, Kerr White, professor of medicine at Johns Hopkins University, said at the outset that "we had only an hour or so to deliberate on these issues," but he concluded, as many have before, that the health-care industry offers many opportunities for economy. HEW Assistant Secretary for Health Charles C.

## The Summit Cast

*The principal participants in the "mini-summit" on Science, Technology and the Economy were:*

H. Guyford Steyer, chairman, science adviser to the President  
Donald J. Blickwede, Bethlehem Steel  
Lewis M. Branscomb, IBM  
Arthur B. Bueche, GE  
Carleton B. Chapman, Commonwealth Fund  
Paul F. Chenea, GM  
Edward E. David Jr., Gould, Inc.  
Donald S. Frederickson, Institute of Medicine  
Norman Hackerman, Rice University  
Hans L. Landsberg, Resources for the Future  
Eric H. Reichl, Consolidated Coal  
Vernon W. Ruttan, Agricultural Development Council  
Kerr White, Johns Hopkins  
William C. White, The Fertilizer Institute

In addition, representatives attended from several federal agencies with major R&D responsibilities, plus members of Science Adviser Steyer's Science and Technology Policy Office.

Edwards added to the opacity of the proceedings by observing that "So, our problem, as I see it, is what we can do immediately to hold down the increasing costs of health care. When you look at that, there aren't many answers."

In regard to agriculture, Vernon W. Ruttan, president of the Agricultural Development Council, said he discerned an "erosion in the quality of the agricultural research establishment, particularly at the federal level . . . the emphasis on the applied science area, I think, has weakened that link to the basic science areas . . . I think that has to be rebuilt."

The discussion then drifted onto the subject of food transportation and spoilages, but became so fragmented as to defy summation, let alone comprehension.

At the conclusion of the meeting, Steyer warmly thanked the participants and said he would summarize their findings and forward them to President Ford. —DSG

## **AAAS Cuts Back Following \$370,000 Deficit Last Year**

Considerable belt-tightening has been taking place at the American Association for the Advancement of Science (AAAS) during the past couple of months in an effort to wipe out a deficit of \$370,000 which occurred in 1973 and to head off inflationary increases which would have added to the financial plight this year.

The cost-saving measures, instituted by *Science* Editor Philip H. Abelson, who took over as acting executive officer of the AAAS in July following the departure of William Bevan, include a reduction in the size of *Science* magazine and a decrease in the number of AAAS employees.

Chief reason for the financial losses is the fact that the AAAS has been expanding its activities during the past few years faster than its income allowed, and when Abelson took a look at the books he decided that corrective action would have to be taken.

He received instructions from the AAAS Executive Committee on July 30 to "conduct the affairs of the Association with the austerity needed to assure that for

the full calendar year of 1974, after interest is credited, there will be no deficit," as a result of which *Science* was reduced to 72 pages (down from 96), and Abelson sent a memo to AAAS staff members, exhorting them to "diminish elective expenses," which he said "include local as well as long-distance telephone calls, travel, expandable supplies and furniture, and committee meetings which can be deferred."

Abelson told SGR last week that the loss will be wiped off the books by the end of the year, and that the AAAS should be able to get by without cancelling any major activities. He pointed out that a number of extraordinary occurrences added to the loss last year. These include the conference in Mexico City, which cost about \$150,000, a 24 percent increase in paper costs for *Science*, and a depressed advertising market. In addition, the AAAS has taken on a number of activities, such as the Public Understanding of Science Program which, although funded by grants from outside the AAAS, have resulted in large overheads for the Association.

## **News Notes: NSF Goes West, White House Science Office...**

The National Science Foundation has opened a branch office in San Francisco. Titled the Western Projects Office (WPO), it is described as a "management experiment" to serve all NSF "clients," but "primarily to improve the formulation and management of projects conducted under NSF's Research Applied to National Needs program in the western United States." The director of the new office is Sidney Sternberg, formerly NSF deputy assistant director for research applications, who has spent the past year at Caltech. Sternberg's address is: National Science Foundation, Western Projects Office, 831 Mitten Rd., San Francisco, Calif. 94010.

WPO is the Foundation's first field office in the U.S. Abroad, it maintains an office in Bucharest, Rumania, to handle exchanges with eastern European nations. That office is headed by Sidney Smith, Science Officer/Attache, U.S. Embassy Bucharest, c/o Department of State, Washington, D.C. 20520.

An office in Tokyo is headed by Manfred Czesla, NSF Liaison Staff, c/o American Embassy, APO, San Francisco, Calif. 96503.

Legislation designed to reinstate science in the White House continues to move slowly through a thicket of Senate committees, and it is now possible that a bill will get the blessing of the full Senate by the end of the year.

The Technology Resources Survey and Applications Act (S.2495), whose chief objective is to establish a three-member Council of Advisers on Science and Technology at the President's elbow, has been approved by the Senate Commerce Committee and the Committee on Aeronautical and Space Sciences, and it is now awaiting the attention of Senator Kennedy's NSF subcommittee.

Kennedy aides expect the bill to be out of committee before the October 11 recess, however, which gives it a good chance of getting on the Senate Calendar, particularly if there is a lame-duck session of Congress.

Although there is no chance that the House will get to considering S.2495 this year, the bill's supporters are hopeful that an overwhelming Senate vote for the measure could spur President Ford to take the initiative in establishing a White House science policy office.

The recently established United States-Israel Binational Science Foundation has issued a pamphlet describing procedures for applying for grants and the research areas it intends to support, which, "for the time being," are described as the natural sciences, agriculture and the health sciences, "science services, such as scientific translations," mass transportation, energy, arid zone research, and environmental problems.

Copies may be obtained without charge from: Office of International Programs, U.S.-Israel Binational Science Foundation, NSF, Washington, D.C. 20550. Telephone: (202) 632-5796.

## Court Orders Public Access to Grant Applications

The U.S. Court of Appeals has issued a ruling which may have a significant impact on the peer-review system at NIH and which is sure to be greeted with alarm when the news filters through to NIH's clients in the academic research community.

The court ruled on September 12 that information contained in applications for research grants submitted to the federal government is not exempt from public disclosure under the Freedom of Information Act, which means that anybody who wants to take a look at a specific grant application can do so.

Since grant applications usually contain a detailed description of how the proposed research will be carried out, and since biomedical science tends to be a fiercely competitive enterprise, most researchers view with horror the prospect of their experimental designs ending up in the hands of competitors from another laboratory.

Nevertheless, the court ruled that it doesn't matter whether or not "biomedical scientists are really a mean-spirited lot who pursue self-interest as ruthlessly as the Barbary pirates did in their own chosen field," because, it held, the Freedom of Information Act clearly applies to grant applications. And that ruling "extends to all types of applications—initial, continuation, supplemental, and renewal—and to progress reports made by grantees as part of the last three kinds of applications."

Aside from the possibility that the ruling could lead to plagiarism of research ideas, NIH officials are concerned about more subtle effects on the way in which grant applications are written and reviewed. They suggest, for example, that scientists will now be wary of putting many details in their grant applications, which will not only make the job of peer-review committees more difficult but will also tend to favor those applicants who have an established reputation.

Whether or not the government appeals the case to the Supreme Court—government lawyers indicated last week that they probably will, although no determination had then been made—there is sure to be a legal fight over how the decision should be interpreted. In short, the argument is whether or not the ruling covers only approved applications or whether applications which are still pending should also be made public.

The confusion stems from the fact that the ruling was made in a case involving eleven specific applications for grants from NIMH, all of which had been approved and funded, although supplemental applications for some of the grants were still pending. NIH lawyers therefore suggest that the ruling applies only to approved applications, while the Washington Research Project Inc., which initiated the court action, maintains that it covers grant applications as soon as they are submitted.

In addition to grant applications, the Washington Research Project was also seeking public access to reports of peer-review committees, which rate the applications according to their scientific merit, but the Appeals Court decided that those are exempt from disclosure under the Freedom of Information Act. That determination is expected to strengthen the government's contention that peer-review committees should meet behind closed doors.

Apart from appeal to the Supreme Court, relief for NIH from the mandates of open government could be provided by Congress. In fact, Senator Robert Dole (R-Kansas) proposed an amendment to the Freedom of Information Act earlier this year which would have exempted all "applications for research grants based on original ideas," but he withdrew it pending the Appeals Court decision (SGR Vol. IV, No. 12). He could propose the amendment again when any health bill comes before Congress.

But it is far from certain that such a move would succeed, since it's difficult to refute the argument that the public has a right to know what the government is buying with the \$19 billion it spends on research and development.

## Energy Agency Stalled

Although a bill designed to establish an Energy Research and Development Administration (ERDA) entered the final stage of its glacial passage through Congress last week with the appointment of a conference committee, the chances of getting final approval of the measure this year are generally considered to be no better than even.

The problem is a number of provisions in the Senate version of the bill which are anathema to most of the House conferees, among whom Chet Holifield (D-Calif.) is perhaps the most prominent. Holifield, a crusty and powerful politician who was chairman of the Joint Committee on Atomic Energy before moving over last year to the chairmanship of the House Government Operations Committee, is particularly concerned about nuclear licensing provisions in the Senate bill which he contends will unduly restrict the development of nuclear power.

According to House staff members, there will also be a fight in the conference over provisions in the Senate bill to set up an Energy Policy Council in the White House, to enable those who successfully contest nuclear licensing decisions to recoup some of their legal fees, and to prevent daylight saving time from being imposed as an emergency measure during the winter.

Although Holifield supports the establishment of ERDA, he is said to be in no mood to compromise on the bill, even though the Administration is lobbying hard to get it passed before the October recess.

## ***Nature* Rejects Ban on Genetic Engineering Papers**

Although the recent call by a committee of the National Academy of Sciences for a moratorium on some types of genetic engineering experiments has met with broad sympathy among biomedical scientists, at least one influential journal has publicly stated that it will not stop publishing the results of such studies.

In an editorial in the September 6 issue, the editor of *Nature* suggests that "any policy that tries to eliminate from the journal reports of experiments that are believed even widely believed—to be potentially dangerous would be quite wrong."

Although declaring "general sympathy with the aims of the NAS group," the editorial points out that it is difficult to decide where to draw the line in refusing to publish research reports if criteria other than scientific merit are invoked. "Should reports of nuclear fission have been called 'potentially dangerous' and in bad taste? Should scientific work emerging from nuclear

detonations or weather modification be kept out of the literature? . . . Those are not questions which can safely be left to a referee with his own personal predilections, or even an editor with his. . ." the editorial states.

Furthermore, the editorial argues that there could even be merit in publishing such papers since "if a scientist has chosen to ignore a widespread call (for a moratorium) then a case could occasionally be made for drawing the community's attention to who he is and what he is doing."

Since the scientific community operates according to the "publish or perish" dictum, a blanket refusal by scientific journals to publish the results of experiments outlined in the proposed moratorium would be a powerful weapon to prevent such research from taking place. *Nature's* stand on the matter has therefore been greeted with dismay among some members of the NAS committee.

## ***HEW Appoints Ethics Panel Under New Research Act***

HEW has announced the appointment of eleven members of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, the body established by Senator Kennedy's National Research Act (SGR Vol. IV, No. 15).

The Commission, which was formally established on September 10, has four months in which to conduct a study of research involving living fetuses and to recommend the circumstances, if any, under which HEW should support such experiments. It must also draft, within two years, regulations to protect the rights of those who take part as subjects in human experimentation.

The members of the Commission, who will select their own chairman, are: Joseph V. Brady, professor of behavioral biology, Johns Hopkins; Robert E. Cooke, vice chancellor for health sciences, University of Wisconsin; Dorothy S. Height, president, National Council of Negro Women; Albert R. Johsen, professor of bioethics, University of California; Patricia King, professor of law, Georgetown University; Karen A. Labacz, professor of Christian ethics, Pacific School of Religion; David Louisell, professor of law, Berkeley; John Kenneth Ryan, professor of obstetrics and gynecology, Harvard Medical School; Donald Wayne Seldin, professor of internal medicine, University of Texas Southwestern Medical School; Eliot Stellar, professor of physiological psychology, University of Pennsylvania; and Robert H. Turtle, attorney, Washington, D.C.

## ***NSF Reports on State R&D, Independent Non-Profit Labs***

The ups and downs in recent years of independent non-profit research institutions and R&D conducted by state governments are detailed in two separate reports recently issued by the National Science Foundation.

In brief, the independent non-profits spent \$995 million in 1973, of which some 70 percent came from the federal government and 10 percent from industry. Their budgets amounted to about three percent of all R&D spending in the U.S., about the same as in 1969, and they also held steady as employers of about four percent of the nation's scientists and engineers. In terms of purchasing power, the total expenditures last year were only slightly higher than in 1966.

The top ten among the non-profits were: Aerospace Corporation (\$81.3 million); Stanford Research Institute (\$68 million); MITRE Corp. (\$57.7 million); Battelle Memorial Institute (\$53.4 million); National Academy of Sciences (\$39.8 million); Pacific Northwest Laboratory (\$37 million); Southwest Research Institute (\$26.6 million); Rand Corp. (\$24.9 million); IIT Research Institute (\$24.5 million), and Sloan-Kettering Institute for Cancer Research (\$15.3 million).

As for R&D spending by state governments, it has quadrupled since 1964, but it is still relatively modest as such things go—amounting nationwide to only \$273 million last year.

The reports on non-profits (NSF 74-309) and on state R&D spending (NSF 74-311) are available without charge from NSF, Division of Science Resources Studies, 1800 G St., N.W., Washington, D.C. 20550.

## Academy Report Urges EPA R&D Reorganization

During its relatively short lifetime, EPA's Office of Research and Development has encountered more than its fair share of criticism, but a recent blunt and outspoken report by the National Academy of Sciences on the way in which EPA plans and manages its research activities is going to prove difficult to overcome.

Although careful to point out that it has no unkind things to say about the quality of either the research EPA is supporting or the agency's "dedicated and competent scientists," an *ad-hoc* Academy committee has told EPA that its research management system is a shambles and that it should be scrapped.

The study is the second highly critical analysis of EPA's research programs to be published this year—the other being a GAO report which concluded that water pollution research is in a mess (SGR Vol. IV, No. 3). The effect is likely to be to strengthen the hand of those who have been arguing that EPA should be divested of many of its research programs if and when an Energy Research and Development Administration is established.

For that reason, EPA Administrator Russell Train is likely to move quickly in implementing the Academy's recommendations. Train has already said that he welcomes the Academy's candor and that the criticisms are being carefully analyzed.

The Academy committee, which was chaired by Robert W. Berliner, former deputy NIH director for science, said that although "the establishment of a successful research and development organization takes time . . . the present system has started in a wrong direction and a fresh start is needed."

Among the faults cited in the report are separation of planning from execution of research, which is "leading to severe resentment among performing researchers"; "the planning system is overburdened with bureaucratic complexities which makes it counter-productive"; "priorities do not reflect the needs of regulatory offices and regional offices because of the 'vacuum cleaner' approach to soliciting ideas", and no long-term program for meeting stated goals has been devised.

EPA's staff has cited a number of reasons for the planning and management mess, among which are the fact that apart from energy programs, the agency's research budget has remained static, and that "enabling legislation is noncoherent and mandates a set of unbalanced and uncoordinated research objectives and timetables." But the committee concluded that "although many of the external constraints on the Office of Research and Development are significant, the faults of the planning and management system are the dominant reasons for failure."

## Ban Upheld on Cyclamate

Latest round in the ongoing saga of cyclamates and government: The FDA has advised Abbott Laboratories, manufacturer of the artificial sweetener, that "further information is needed before a clearcut decision on the safety of cyclamate can be made."

The decision turns down Abbott's November 1973 appeal of the ban that FDA imposed on cyclamates in 1969 following a ruling earlier that year that merely imposed a low-level limit on use of the substance. The limit, in turn, came a few years after FDA ruled that it saw no reason to restrict the use of cyclamate, which, according to some independent researchers, must be consumed in carload quantities to produce harmful effects.

The committee therefore recommends that the present management system should be abolished and that responsibility for carrying out research programs should be delegated directly to the directors of the National Environmental Research Center. The headquarters staff should be kept to a minimum, it should not serve "as a filter or layer through which the National Environmental Research Center directors report," and it should be decentralized as rapidly as possible from Washington to major field units.

The report is the first to emerge from a \$5-million contract between the Academy and EPA under which the Academy will examine a variety of EPA programs (SGR Vol. IV, No. 7). It was completed in record time to be ready before EPA appoints a new Assistant Administrator for Research and Development to fill the vacancy left by the resignation in May of Stanley M. Greenfield.

Copies of the *Letter Report and Review Committee on Management of EPA's Research and Development Activities* can be obtained from EPA's Office of Information, 401 M Street, S.W., Washington, D.C. 20460.

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## Kissinger Unleashes Arms Control Director

As a pygmy organization attached to the State Department, the Arms Control and Disarmament Agency (ACDA) has generally been confined to concocting justifications for the hardline positions worked out by the giants of the national security apparatus. But since Secretary of State Kissinger and Defense Secretary Schlesinger have been maneuvering for each other's throats, ACDA has been unleashed a bit in behalf of Kissinger's thesis that there comes a point in armaments when enough is enough.

Thus, ACDA Director Fred C. Ikle helped bring down the Army's plans for proceeding with binary nerve gas weapons by telling Congress that a move toward production of the new weapons would undermine Soviet-American negotiations for a ban on chemical warfare. And just recently, in a speech to the Council on Foreign Relations, Ikle took a new tact in assailing the Defense Department contention that nuclear warfare can be conducted short of universal destruction.

Virtually every excursion into the testing of new nuclear weapons, he told the Council on Sept. 5 in Chicago, has resulted in dangerous and unforeseen effects, leading to the conclusion, he said, that "the damage from nuclear explosions to the fabric of nature and the sphere of living things cascades from one effect to another in ways too complex for our scientists to predict. Indeed, the more we know, the more we know how little we know," he continued, as a lead in to a recitation of half-a-dozen past surprises:

*First.* The 1954 test of an "experimental thermonuclear device" in the Marshall Islands was expected to produce the equivalent of eight million tons of TNT; the yield, however, amounted to 15 million tons, and seriously contaminated an area of 7000 square miles.

*Second.* The unexpected spread of nuclear fallout exposed residents of far away atolls to radiation exposure that has resulted in serious illness.

*Third.* The 1958 test series produced unexpected interruptions of radio communications.

*Fourth.* It was then found that distant nuclear explosions can damage electronic equipment. Heat and blast had been considered the primary effects, he stated, "But meanwhile, the British had discovered that the electro-magnetic pulse produced by nuclear explosion could destroy critical command and control links and computer memories beyond the range of blast damage."

*Fifth.* "It was found that through a phenomenon dubbed 'fratricide' some warheads might destroy or divert each other before they could destroy the intended target."

*Sixth.* There is the "possibility that a large number of nuclear explosions might bring about the destruction, or partial destruction, of the ozone layer in the stratosphere that helps protect all living things from ultraviolet radiation."

In regard to the last item, Ikle noted that "Not studies about thermonuclear war, but totally unrelated investigations of the supersonic transport aircraft surfaced the ozone problem."

"The six examples I mentioned," he continued, "show how the accidents of scientific discovery continue to add to our knowledge of nuclear warfare. Each of these discoveries tore a hole in the facile assumptions that screened the reality of nuclear war. Each brought a new glimpse into the cauldron of horrors. What unexpected discovery will be next? What will surprise number seven be? Number eight?"

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